

What is claimed is:

1. An ophthalmic measuring apparatus comprising:

a first illuminating optical system including a first
5 light source for emitting a light flux of a first wavelength,
for illuminating an retina of a subject eye, to be condensed
on a place close to the retina, with the first illumination
light flux from the first light source;

a first light receiving optical system including a
10 first conversion member for converting a reflected light flux
reflected by the retina of the subject eye into at least 17
beams, and a first light receiving part for receiving the
plural light fluxes converted by the first conversion member
as first received light signals, for guiding the reflected
15 light flux to the first light receiving part;

first movement means for moving a condensing position
of the first illuminating optical system;

second movement means for optically moving the first
light receiving part and the first conversion member;

20 a mode changeover part for switching between an
interlock mode in which movement operations of the first
movement means and the second movement means are interlocked
and an independent mode in which they can be independently
controlled; and

25 an arithmetic part for obtaining an optical
characteristic of the subject eye by performing a Zernike
analysis on the basis of tilt angles of the light fluxes
obtained by the first light receiving part,
wherein

the first movement means and the second movement means can adjust the condensing position of the first illumination light flux and condensing positions of the light fluxes converted by the first conversion member according to received light positions and/or received light levels of the first received light signals at the first light receiving part.

2. An ophthalmic measuring apparatus according to claim 1, wherein, when the independent mode is selected by the mode changeover part, the arithmetic part obtains received light position intervals from the first received light signals at the first light receiving part, and the condensing positions of the light fluxes converted by the first conversion member can be adjusted by the second movement means so that the intervals fall within a predetermined interval range.

3. An ophthalmic measuring apparatus according to claim 1, wherein, when the independent mode is selected by the mode changeover part, the arithmetic part obtains the received light position intervals from the first received light signals at the first light receiving part, and the condensing positions of the light fluxes converted by the first conversion member can be adjusted by the second movement means to a minus side in a case where there is a region in which the interval is narrower than the predetermined interval range, and to a plus side in a case where there is a region in which the interval is wider than the predetermined interval range.

4. An ophthalmic measuring apparatus according to claims 1, wherein, when the independent mode is selected by the mode changeover part, the arithmetic part obtains
5 received light levels from the first received light signals at the first light receiving part, and the condensing position of the first illumination light flux can be adjusted by the first movement means so that the levels fall within a predetermined level range.

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5. An ophthalmic measuring apparatus according to claim 1, wherein, when the independent mode is selected by the mode changeover part, in accordance with an operation of an input part by an operator, the condensing positions of the light
15 fluxes converted by the first conversion member can be adjusted by the second movement means, and the condensing position of the first illumination light flux can be adjusted by the first movement means.

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6. An ophthalmic measuring apparatus comprising:

a first illuminating optical system including a first light source for emitting a light flux of a first wavelength, for illuminating an retina of a subject eye, to be condensed on a place close to the retina, with the first illumination
25 light flux from the first light source;

a first light receiving optical system including a first conversion member for converting a reflected light flux reflected by the retina of the subject eye into at least 17 beams, and a first light receiving part for receiving the
30 plural light fluxes converted by the first conversion member,

for guiding the reflected light flux to the first light receiving part;

first movement means for moving a condensing position of the first illuminating optical system;

5 second movement means for optically moving the first light receiving part and the first conversion member; and

an arithmetic part for obtaining an optical characteristic of the subject eye by combining tilt angle data of the light fluxes obtained by the first light receiving part under different conditions by the first movement means and the second movement means, and performing a Zernike analysis on the basis of the combined data.

7. An ophthalmic measuring apparatus according to claim 15 6, further comprising a mode changeover part for switching between an interlock mode in which movement operations of the first movement means and the second movement means are interlocked, and an independent mode in which they can be independently controlled, wherein

20 the arithmetic part obtains the optical characteristic of the subject eye by combining the tilt angle data of the light fluxes obtained by the first light receiving part under different conditions in each of the modes, and performing the Zernike analysis on the basis of the combined data.

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8. An ophthalmic measuring apparatus according to claim 1 or 6, wherein, when values based on the first received light signals are not or greater than a predetermined level, the arithmetic part moves the first illuminating optical

system and the first light receiving optical system together by the first and the second movement means.

9. An ophthalmic measuring apparatus according to claim
5 1 or 6, further comprising:

a refractive power measurement illuminating optical system for irradiating a retina of the subject eye with a pattern for refractive power measurement; and

10 a refractive power measurement light receiving optical system for receiving a pattern image projected on the retina of the subject eye, wherein

the arithmetic part obtains refractive power from the pattern image received by the refractive power measurement light receiving optical system, and moves the first
15 illuminating optical system and the first light receiving optical system together by the first and the second movement means on the basis of the refractive power.